



Attorney Docket No. 033082 M 286

P A T E N T

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: ) **CONFIRMATION NO.: 3997**  
)  
) **Kazuhide HASEBE, et al.** )  
)  
U.S. Serial No.: 10/553,828 ) **Group Art Unit: 1792**  
)  
Filed: October 20, 2005 ) **Examiner: Joy L. Watson**

For: **METHOD OF CLEANING HEAT TREATMENT APPARATUS**

**DECLARATION UNDER 37 C.F.R. § 1.132 ATTESTING TO HIGH EXPENSE  
OF QUARTZ COMPONENTS CLEANED BY APPLICANTS' METHOD**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

1. I am a co-inventor of the above-captioned application and my signature appears below.
2. The quartz structures that are cleaned according to our cleaning methods claimed in our application are expensive. A quartz treatment vessel, such as treatment vessel 8 shown in our application as vessel 8 in Figures 1, 3, and 4, costs about \$50,000. Our cleaning methods also are applicable to cleaning quartz wafer boats, such as boat 10, in the same-mentioned figures. Such a boat also is expensive.
3. Our claimed methods clean with a mixture of HF gas and NH<sub>3</sub> gas supplied into the quartz treatment vessel to remove deposited films on the vessel, and on other quartz structures such as a wafer boat in the vessel. However, mixtures of HF and NH<sub>3</sub> gases also can damage quartz exposed to these gases. Our methods significantly restrain such damage to the quartz.
4. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date

2008.4.29

Kazuhide Hasebe  
Signature

Kazuhide HASEBE

Type Name of Inventor